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## PROGRAMMES IN MATHEMATICS, 1884-85.

## GRADUATE COURSES.

## PROFESSOR NEWCOMB:

Analytical and Celestial Mechanics.  
*Twice weekly, through the year.*

## DR. STORY:

General Introductory Course for Graduates (including Theory of Numbers, Higher Algebra, Higher Plane Curves, Surfaces and Twisted Curves, Quaternions, Calculus of Operations, Probabilities, Partial Differential Equations, Elliptic Functions, and Mechanics.

*Five times weekly, through the year.*

This course is intended as preparatory for all the more advanced courses, and candidates for the Doctor's degree in Mathematics are expected to take it in the first year of their candidacy, if they have not previously taken it.

Theory of Numbers.

*Twice weekly, first half-year.*

Higher Algebra.

*Twice weekly, second half-year.*

Modern Synthetic Geometry.

*Three times weekly, first half-year.*

Quaternions.

*Three times weekly, second half-year.*

Mathematical Seminary.

*Weekly through the year.*

The exercises of this Seminary will consist of original work by the students, under the guidance of the Director, in prescribed subjects. The subjects chosen will be such as promise continuous work for a considerable length of time, the object being to impart the habit of investigation, rather than to reach results. The students will be required to make weekly reports of progress, the results obtained will be discussed, and new lines of research suggested from time to time.

## DR. CRAIG:

Theory of Functions (including Elliptic Functions).

*Three times weekly, through the year.*

Hydrodynamics.

*Three times weekly, first half-year.*

Calculus of Variations.

*Twice weekly, first half-year.*

Linear Differential Equations.

*Twice weekly, second half-year.*

In this course it is intended to give an account of the more recent investigations in the Theory of Linear Differential Equations, particular attention being directed to the work of Fuchs, Klein, and Poincaré.

Partial Differential Equations.

*Twice weekly, second half-year.*

Mathematical Seminary.

*Weekly, through the year.*

The subjects to which attention will be particularly directed are the Theory of Analytical Functions and Lamé's Functions. During the first two or three meetings of the Seminary the Director will occupy the hour, and after that time the students will read dissertations on subjects selected for them by the Director. The work assigned will be divided into three parts: solution of problems, the historical investigation of the above mentioned subjects, and reports on current mathematical journals.

## DR. FRANKLIN:

Problems in Mechanics.

*Twice weekly, through the year.*

Historical Lectures on Mathematical Topics by the Instructors, Fellows, and some of the Graduate Students.

*Once in two weeks, through the year.*

## MATHEMATICAL SOCIETY.

The Mathematical Society, composed of the instructors and advanced students, will meet monthly as heretofore for the presentation and discussion of papers or oral communications.

## UNDERGRADUATE COURSES.

## FIRST YEAR:

Conic Sections.

*Twice weekly, through the year.* DR. STORY.

Differential and Integral Calculus.

*Three times weekly, through the year.*

DR. FRANKLIN.

## SECOND YEAR:

Total Differential Equations.

*Twice weekly, through the year.* DR. CRAIG.

Theory of Equations.

*Three times weekly, first half-year.*

DR. FRANKLIN.

Solid Analytic Geometry.

*Three times weekly, second half-year.*

DR. FRANKLIN.

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